**Amendments to the Claims**

Claim 1 (original): An isolated nucleic acid molecule having the sequence of SEQ ID NO: 1, said nucleic acid molecule comprising a nucleotide sequence encoding a MOAT-B transporter protein about 1350 amino acids in length, said encoded transporter protein comprising a multi-domain structure including a tandem repeat of nucleotide binding folds appended C-terminal to a hydrophobic domain, said nucleotide binding folds having Walker A and B ATP binding sites, said C-terminal domain having a plurality of membrane spanning helices.

Claim 2 (original): The nucleic acid molecule of claim 1, which is DNA.

Claim 3 (original): The DNA molecule of claim 2, which is a cDNA comprising a sequence approximately 5.9 kilobase pairs in length that encodes said MOAT-B transporter protein.

Claim 4 (canceled)

Claim 5 (original): An isolated RNA molecule transcribed from the nucleic acid of claim 1.

Claim 6 (currently amended): ~~A~~ An isolated nucleic acid molecule encoding a MOAT-B transporter protein having an amino acid sequence of SEQ ID NO: 2.

Claims 7-44 (canceled)

Claim 45 (previously presented): A plasmid comprising a nucleotide sequence of SEQ ID NO: 1.

Claim 46 (previously presented): A vector comprising a nucleotide sequence of SEQ ID NO: 1.

Claim 47 (previously presented): A retroviral vector comprising a nucleotide sequence of SEQ ID NO: 1.

Claim 48 (previously presented): A host cell comprising a nucleic acid molecule having a sequence of SEQ ID NO: 1.

Claim 49 (previously presented): The host cell as claimed in claim 48, wherein said host cell is selected from the group consisting of bacterial, fungal, mammalian, insect and plant cells.

Claim 50 (previously presented): The host cell as claimed in claim 48, wherein said nucleic acid is provided in a plasmid and is operably linked to mammalian regulatory elements which confer high expression and stability of mRNA transcribed from said nucleic acid.

Claim 51 (previously presented): The host cell as claimed in claim 48, wherein said nucleic acid is provided in a plasmid and is operably linked to mammalian regulatory control elements in reverse anti-sense orientation.

Claims 52-55 (canceled)

Claim 56 (previously presented): A method for screening in vitro a test compound for inhibition of MOAT mediated transport, comprising:

a) providing a host cell expressing at least one MOAT-encoding nucleic acid having a sequence of SEQ ID NO: 1;

b) contacting said host cell with a compound suspected of inhibiting MOAT-mediated transporter activity; and

c) assessing inhibition of transport mediated by said compound.

Claim 57 (previously presented): The method as claimed in

claim 56, wherein inhibition of MOAT mediated transport is indicated by restoration of anticancer drug sensitivity.

Claim 58 (previously presented): The method as claimed in claim 57, wherein said inhibition of MOAT mediated transport is indicated by a reduction of transporter mediated cellular efflux of anticancer agents.

Claim 59 (canceled)